

E1 / 1. (Amended) A pharmaceutical composition comprising a nucleic acid and [a penetration enhancer] at least two fatty acids or pharmaceutically acceptable salts thereof.

E2 / 3. (Amended twice) The pharmaceutical composition of claim 1, wherein said nucleic acid is an oligonucleotide [in prodrug form].

E3 / 5. (Amended) The pharmaceutical composition of claim [4] 1, wherein [said] each fatty acid is, independently, arachidonic acid, oleic acid, lauric acid, caprylic acid, capric acid, myristic acid, palmitic acid, stearic acid, ~~linoleic acid~~, linolenic acid, dicaprate, tricaprate, monoolein, dilaurin, glyceryl 1-monocaprate, 1-dodecylazacycloheptan-2-one, an acylcarnitine, an acylcholine, or a monoglyceride, a diglyceride or a pharmaceutically acceptable salt thereof.

E4 / 23. (Amended) The pharmaceutical composition of claim [2,] 3 wherein said oligonucleotide is an antisense oligonucleotide.

24. (Amended) The pharmaceutical composition of claim 23, wherein said antisense oligonucleotide modulates the expression of a cellular adhesion protein or the rate of cellular proliferation[, or has biological activity against diseases resulting from eukaryotic pathogens, retroviruses including HIV or non-retroviral viruses].

20FI / 25. (Amended twice) A method of enhancing penetration of a nucleic acid across the alimentary canal of an animal [treating an animal having or suspected of having a disease or disorder that is treatable with one or more nucleic acids] comprising administering to said animal [a therapeutically effective amount of] the pharmaceutical composition of claim 1[, thereby treating said animal having or suspected of having said disease or disorder].

26. (Amended) The method of claim [23,] 25 wherein said administration is sublingual, endoscopic or rectal.

27. (Amended) The method of claim [23,] 25 wherein said administration is oral.

28. (Amended) The pharmaceutical composition of claim 1 wherein said pharmaceutical composition, when administered to a mammal, results in [more than] at least about 15% bioavailability of said nucleic acid in said mammal.

41. The pharmaceutical composition of claim 5 wherein one of said fatty acids is lauric acid and the other of said fatty acids is capric acid.

42. The pharmaceutical composition of claim 1 further comprising a bile salt.

43. The pharmaceutical composition of claim 42 wherein said bile salt is cholic acid, dehydrocholic acid, deoxycholic acid, glucolic acid, glycholic acid, glycodeoxycholic acid, taurocholic acid, taurodeoxycholic acid, chenodeoxycholic acid, ursodeoxycholic acid, sodium tauro-24,25-dihydro-fusidate, sodium glycodihydrofusidate, polyoxyethylene-9-lauryl ether or a pharmaceutically acceptable salt thereof.

44. A composition comprising a nucleic acid and at least two fatty acids or pharmaceutically acceptable salts thereof.

45. The composition of claim 44 wherein said nucleic acid is an oligonucleotide.

46. The composition of claim 44 wherein each fatty acid is, independently, arachidonic acid, oleic acid, lauric acid, caprylic acid, capric acid, myristic acid, palmitic acid, stearic acid, linoleic

acid, linolenic acid, dicaprates, tricaprates, monoolein, dilaurin, glyceryl 1-monocaprates, 1-dodecylazacycloheptan-2-one, an acylcarnitine, an acylcholine, or a monoglyceride, a diglyceride or a pharmaceutically acceptable salt thereof.

47. The composition of claim 44 further comprising at least one carrier compound.

48. The composition of claim 47 wherein said carrier compound is selected from the group consisting of polyinosinic acid, dextran sulfate, polycytidic acid and 4-acetamido-4'-isothiocyano-stilbene-2,2'-disulfonic acid.

49. The composition of claim 45 wherein said oligonucleotide is an antisense oligonucleotide.

50. The composition of claim 49 wherein said antisense oligonucleotide modulates the expression of a cellular adhesion protein or the rate of cellular proliferation.

51. The composition of claim 45 wherein said oligonucleotide has at least one chemical modification selected from the group consisting of a modified nucleobase, a modified sugar residue, and a modified backbone linkage.

52. The composition of claim 51 wherein said oligonucleotide has at least one chemical modification selected from the group consisting of a cytosine to 5-methyl-cytosine substitution, a phosphorothioate linkage and a 2'-methoxyethoxy modification.

53. The composition of claim 44 wherein said composition is water based.

54. The composition of claim 44 wherein said composition is proylene glycol based.

55. The composition of claim 44 wherein said composition comprises less than about 8% water.
56. The composition of claim 44 wherein said composition, when administered to a mammal, results in at least about 15% bioavailability of said nucleic acid in said mammal.
57. The composition of claim 46 wherein one of said fatty acids is lauric acid and the other of said fatty acids is capric acid.

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Sub F5 → 58. The composition of claim 44 comprising a bile salt.

59. The composition of claim 58 wherein said bile salt is cholic acid, dehydrocholic acid, deoxycholic acid, glucolic acid, glycholic acid, glycodeoxycholic acid, taurocholic acid, taurodeoxycholic acid, chenodeoxycholic acid, ursodeoxycholic acid, sodium tauro-24,25-dihydrofusidate, sodium glycodihydrofusidate, polyoxyethylene-9-lauryl ether or a pharmaceutically acceptable salt thereof.

Sub F6 → 60. The pharmaceutical composition of claim 3 wherein said oligonucleotide is in prodrug form.

61. A pharmaceutical composition comprising a nucleic acid and capric acid or lauric acid or a pharmaceutically acceptable salt thereof.

62. The composition of claim 61 wherein said nucleic acid is an antisense oligonucleotide.

Sub H3 → 63. The composition of claim 62 wherein said antisense oligonucleotide modulates the expression of a cellular adhesion protein or the rate of cellular proliferation.